

METHOD AND APPARATUS FOR REAL-TIME FAULT-TOLERANT MULTICASTS IN COMPUTER NETWORKS

Abstract of the Disclosure

The sender of a multicast in a computer network attaches an official release time to the message being multicast, asking every receiver to process the message at or after the official release time. A receiver may receive a cancellation notice after receiving the multicast message but before its official release time. The official release time is chosen so that the multicast can succeed or be cancelled by the official release time with the probability at or above a user selected level under reasonably bounded numbers of occurrences of permanent and temporary faults and reasonably bounded durations of temporary faults. This multicast protocol is formulated to suit the environment where it is not worth it for a node to wait for a reply from another node beyond a certain time-period, called the timeout period.